

NACU, Hristodor, ing.

Observations based on the long working of a steam boiler with
high parameters. Energetica Rum 9 no.8:316-321 Ag '61.

NACU, H., ing.

Observations on a case of corrosion occurring in a sulfite
pulp digester plated internally with antiacid steel. Cel
hirtie 10 no.12:433-436 D'61.

NACU, M.

IONESCU-MUSCEL, I., prof. ing.; KEIMER, I., ing.; COTIGARU, B., ing.;
RUSANOVSKI, Maria, ing.; GHENCEA, M., ing.; COSTENCIUC, N., ing.;
GHERSIN, B., ing.; MATEI, Ana, ing.; IONESCU-MUSCEL, C., ing.;
NACA, M., ing.

Contributions to the problem of wool washing under optimum
temperature and pH conditions. Ind text Rum 13 no.5:197-203
My '62.

1. Institutul de stiinte economice V.I. Lenin (for Ionescu-
Muscel, I., Kelmer, Cotigaru). 2. Laboratorul central Ministerul
Industriei Uscale (for Rusanovschi, Ghencea). 2. Fabrica Textila
Grivita (for Costenciuc, Ghersein). 4. Ministerul Industriei
Petroliului si Chimiei (for Matei). 5. Institutul de Oncologie
(for Ionescu-Muscel, C.). 6. Fabrica Electrotehnica (for Nacu).

NACU, Vasile, arhitect

Modern architecture. Constr Buc 16 no.759:1 25 J1 '64.

1. Office of Systematization, Architecture, and Construction Projects, Iasi.

KANGRGA, Nedeljko ; Nacvinski, Konstantin.

Apropos of 2 cases of perforated mucocoele of the appendix.
Srpski arch. celok. lek. 91 no.11:1071-1074 N°63

1. Hirursko odeljenje Zeleznicke bolnice - Dedinje u Beogradu;
(nacelnik: prim. dr. Branko J.Jovanovic); Hirursko odeljenje
Opste bolnice u Leskovcu (sef: prim.dr. Dusan Dekleva

*

NACZYNSKI, J.

V. 1658. DETERMINATION OF NAPHTHALES IN WASH OILS. Naczynski, J.
(Gas, Wood, Tech. Sanit. (Gas, Water, Sanit. Engng. Warsaw), June 1955, Vol. 29,
195-196; abstr. in App. Mech. Industr. Gas France Circ. Bibliogr., 15 Aug. /
15 Sept. 1955, (8), 10). The principal methods are mentioned and two methods
used at the Polish Central Gas Laboratory are described, viz: fixation by
picric acid and a modified Schloffer and Flachs method for oxidizing
naphthalene homologues using potassium permanganate. FU

NACZYNSKI, JERZY

Poland /Chemical Technology. Chemical Products
and Their Application

I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31863

Author : Naczynski Jerzy

Title : Determination of Naphthalene Content in Absorbent
Oils

Orig Pub: Gaz, woda, techn. sanit., 1955, 29, No 6, 194-196

Abstract: A critical review of the current methods used at
coking plants for determining the content of
naphthalene (N) in absorbent oils, tars and their
fractions (methods of freezing, nitration, combin-
ing N with picric acid, polarography). A method
is reported which the author has developed for
determining the total content of N in tetralin and

Card 1/2

Poland /Chemical Technology. Chemical Products
and Their Application

I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31863

absorbent oils, and which is a modification of the picric acid method, that makes it possible to carry out the analysis in 2 hours with an error not exceeding 2%. The method and apparatus are described in detail. For determination of pure N in various solvents, a modification of the method of Schlepfer and Flachs has also been evolved, which is characterized by the fact that absorption of N with picric acid is carried out at a temperature of 4°C, and titration is effected with alkali (KOH) using phenolphthalein as indicator.

Card 2/2

NACZYNSKI, JERZY

Poland /Chemical Technology. Chemical Products
and Their Application

I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31830

Author : Daniec Eugeniusz, Naczynski Jerzy

Title : Purification of Gas to Remove Naphthalene

Orig Pub: Koks, smola, gaz, 1956, 1, No 3, 107-113

Abstract: A review of the current methods of purification of gases of coking plants and gas works to remove naphthalene (including the methods disclosed in a number of patents), and also of the procedures used to remove naphthalene from pipe lines. The inadequate technological level of naphthalene removal in Czechoslovakia and Poland is noted, and also the necessity of improving the methods

Card 1/2

Poland /Chemical Technology. Chemical Products
and Their Application

I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31830

of naphthalene removal from gases, and adopt-
ing these methods in practice. Bibliography 31
references.

Card 2/2

NACZYŃSKI J.

Gasification of gas-flaming coals in retorts. W. Kijewski, J. Naczyński, A. Rudzińska, and J. Tromaczynski. *Prace Inst. Atomowej, Międzyw. 8*, 818-19 (1960) (English summary). It was found in the investigations on a commercial scale that gas-flaming coals can be used in gas retorts in place of presently used gas coals. The particle size of gas-flaming coals should not be below 10 mm.; the ash content of these coals should not be greater than the ash content of gas coals or coals for making coke. The amt. of coke obtained from gas-flaming coals is approx. the same as from gas coals; however, their mech. strength is lower. Com. value of coke contg. small particles 10-40 mm. is also lower. The heating value of the gas produced from coal-flaming coals is also lower. As far as tar is concerned its yield and properties are approx. the same as from gas coals.

P. J. Hendel

NACZYNSKI, J.

Feb. 1958. REGENERATION OF TETRALIN USED FOR NAPHTHALENE REMOVAL FROM COKE
OVEN GAS. Daniec, E. and Naczynski, J. (Gaz. Woda, Tech. Sanit. (Gas,
Water, Sanit. Engng, Warsaw), Jan. 1958, vol. 30, 2-6; abstr. in Ass. Tech.
Industr. Gaz. France Circ. bibliogr., 15 Apr. 1958, (4), 8). Tetralin can be
regenerated and the dissolved naphthalene recovered by fractional distillation
and condensation. Industrial scale tests have shown regeneration to be
economic.

2

NACZYNSKI, J.

1490. REMOVAL OF NAPHTHALENE FROM GAS USING TETRALINE. Naczynski, J.
(Gaz, Woda, Tech. Sanit. (Gas, Water, Sanit. Engng, Warsaw), May 1956, vol. 30,
169, 179; abstr. in Ass. Tech. Industr. Gaz France Circ. bibliogr., 15 July
1956, (7), 19). Naphthalene solubility in tetraline and its application to
the problem of removal of naphthalene and recovery of naphthalene and tetraline are
considered. The Otto column, which treats gas at 5-10 atm pressure and 50-
100° temperature and its operation are described.

Jhm LFH

NACZYNSKI, J.

NACZYNSKI, J. Regenerating tetralin used in the denaphtalizing of coke-oven
ga. p. 2. GAZ, WODA I TECHNIKA SANIT ARNA. Warszawa, Poland. Vol. 30,
No. 1, Jan. 1956

SOURCE: East European Accessions List (EEAL) LC Vol. 5, No. 6, June 1956

NACZYŃSKI, JERZY

POLAND/Chemical Technology, Chemical Products and Their
Application, Part 3. - Treatment of Solid Combustible
Minerals.

H-22

Abs Jour: Referat. hurnal Khimiya, No 10, 1958, 33769.

Author : Eugeniusz Daniec, Jerzy Naczynski, Hanna Regulaska.

Inst : Not given.

Title : Removal of Naphthalene Deposits from Gas Piping with
Solvents.

Orig Pub: Gaz, woda, techn. sanit., 1957, 31, No 8, 287-293.

Abstract: It was shown by laboratory experiments and at work
that a mixture of solvent naphtha with tricresol in the
proportion of 9 : 1 replaced tetralin completely in
recovering naphthalene (N) from a gas flow, as well as
at the removal of N deposits from the inside surface
of pipes. It is recommended to introduce the mixture

Card : 1/2

Naczynski, J.

✓ 2318. CARBONISATION TESTS ON COAL FROM THE POLSKA MINE. Naczynski, J. and Mikoda, W. (Gas, Water, Tech. Sanit. Gas, Water, Sanit. Engng, Warszawa), Jan. 1957, vol. 31, 4-6; abstr. in Ass. tech. Industr. Gaz France Circ. bibliogr., 15 Apr. 1957, (4), 11). Recent carbonization experiments on flame and gas flame coals in Klonne retorts in Radom gas works are described. Two types of coal from the Polska mine were used with carbonisation times of 14 to 17 hours. Gas and coke produced were inferior in quantity and quality to those from usual gas coals. Optimum carbonisation time is 16 hours at 1000 - 1100°.

2

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POLAND / Chemical Technology. Processing of Solid Fuels.

H-22

Abs Jour : Ref. Zhur-Khimiya, No 12, 1958, 40953-7

Author : Danets, Nachinsky, Regul'skaya.

Inst : Institut Chemicznej Pozerobki Wogla.

Title : A method for cleaning gas pipes from naphthalene deposits.

Orig Pub : Pol'sk pat. 39579, 10.01.57

Abstract : The gas pipes are cleaned from naphthalene deposits by passing a liquid or solvent vapors thru them. The above method is characterized by the use of a two-component, carefully blended mixture as the solvent, which is composed of solvent naphtha(S) and tricresol(s mixture of o-, m-, and p-cresols)(T), aniline(A), or picoline(P). The ratio of the components can be(in %): 90S and 10T, 80S and 20A, or

Card 1/2

POLAND/Chemical Technology. Chemical Products and H
Their Uses. Part III. Chemical Processing
of Solid Fossil Fuels.

Abs Jour : Ref Zhur-Khiniya, No 15, 1958, 51-82

Author : Daniec, E., Tromszczynski, J., Naczynski, J.
Inst : -
Title : Protective Devices for Gas Burners.

Orig Pub : Gaz, woda, techn. sanit., 1957, 31, No 12,
468-472

Abstract : A survey of protective devices for gas
burners of municipal and industrial ovens
used in various countries was presented.
The devices automatically stop gas inflow,
upon extinction of the flame. A possibility
of construction of similar instruments using

Card : 1/2

MACZYNSKI, J.

FIG. 101

PERIODICAL: POLSKI, AUTOMATYKA, KONTROLA, Vol. 4, No. 8, Aug. 1961.

MACZYNSKI, J. The problem of control of automatic regulation in the gas industry. p. 341.

Monthly List of East European Accessions (EAI) 10 Vol. 1, p. 1.
April 1969, London.

NACZYNSKI, J

"A new balance for weighing coal charges in gasworks."

p.114 (Koks, Smola, Gaz, Vol. 3, no. 3, May/ June 1958)

Monthly Index of East European Accessions (EEAI) LC, Vol. 3, no. 1, Jan 59

POLAND/Chemical Technology. Chemical Products and Their Applica- H-3
tion. Instruments and Automation

Abs Jour : Ref Zhur - Khim., No 24, 1956, No 81912

Author : ~~Naczynski J.~~ Rudinska J., Tromszczynski J.

Inst : -

Title : Control and Automatic Regulation of Technological Processes
of Gas Industry

Orig Pub : Gas, Woda i techn. sanit., 1958, 32, No 3, 116-121

Abstract : Reviewed are the basic integral parts of coke-gas industry
with a description of modern instruments and apparatus em-
ployed for the automatic control of temperature, pressure,
humidity, O₂ content, and other process variables involved.
Six technological flow diagrams are attached that depict
position of such instruments and indicate their inter-
relation with regard to operation of the whole operational
blocks or departments, as well as to operating characteris-
tics of the coal gasification process. -- Yu. Skorotskiy.

Card : 1/1

NACZYNSKI, Jerzy; TROMSZCZYNSKI, Janusz

Safety devices in gas appliances. Koks 7 no.2:81-85 Mr-Apr '62

1. Centralne Laboratorium Gazownictwa, Warszawa.

NACZYNSKI, Jerzy

Equipment of modern gas appliances. Gaz woda techn sanit 36 no. 4:
136-139. Ap '62

NACZYNSKI, Jerzy; TROMSZCZYNSKI, Janusz

Material and heat balances of gas installations. Gaz woda tech
sanit 36 no.5:172-175 My '62.

1. Centralne Laboratorium Gazownictwa, Warszawa.

PAWLIKOWSKI, T.; NACZYNSKI, Jerzy; PASYNKIEWICZ, J.

Review of publications on gas engineering. Gaz woda techn
sanit 37 no.8:266-267 Ag '63.

KIJEWSKI, Wacław, mgr inż.; NACZYNSKI, Jerzy, inż.; ZYLKO, Wacław, mgr.

Problems and state of gas engineering in the German Democratic Republic as seen from certain centers. Gaz woda techn sanit 37 no.4/5:133-136 Ap-May '63.

1. Central Gas Engineering Laboratory, Warsaw.

NADZYNSKI, Jerry

a few publications. It is not known if
they are.

NACZYNSKI, Jerzy

Problem of balance calculation of thermal gas installations.
Gaz woda techn sanit 37 no.6:199-203 Je '63.

1. Central Gas Engineering Laboratory, Warsaw.

NACZYNSKI, Jerzy; PLESKACZ, Janina; TROMSZCZYNSKI, Janusz

VIAG generators after guarantee tests in Poland. Gaz woda techn
sanit 37 no.7:226-229 J1 '64.

1. Central Gas Engineering Laboratory, Warsaw.

NACZYNSKI, Jerzy

Meeting the peak demand by generator gas. Gaz woda techn sanit 37
no.10:346-348 O '63.

1. Central Gas Engineering Laboratory, Warsaw.

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R001135910013-7

SECRET

CONFIDENTIAL

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R001135910013-7"

NACZYNSKI, J.

Sixth World Power Engineering Conference in Melbourne. Gaz woda
techn sanit 38 no.2:71-72, 3 of cover F '64.

NACZYNSKI, J.

Method of pyrolytic decomposition of hydrocarbons at any
boiling point. Gaz woda techn. sanit 38 no.3:3 of cover
M- '64.

NACZYNSKI, Jerzy

Calculation of the burnt gas quantity and the heat efficiency coefficient for gas heated ovens. *Gas woda techn sanit* 38 no.4:135-137 Ap '64

Improved method and equipment increasing the efficiency of generators gasifying solid and liquid fuels. *Ibid.*: 3 of cover.

1. Central Gas Engineering Laboratory, Warsaw.

1. The first part of the document is a list of the names of the individuals who were involved in the project. The names are listed in alphabetical order.

2. The second part of the document is a list of the organizations that were involved in the project. The organizations are listed in alphabetical order.

3. The third part of the document is a list of the dates when the project was carried out. The dates are listed in chronological order.

NAD' (HUNGARIAN)

see NAGY

AUTHOR: Nad', A.A., Gusev, V.D.

113-58-7-9/25

TITLE: Push-Button Control of the Transmission (Knopochnoye upravleniye korobkami peredach)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 7, pp 18-20 (USSR)

ABSTRACT: The new ZIL-111, automobile which will be released in 1958, has been equipped with a push-button control of the transmission. The experimental model of the M-13 automobile of the Gor'kovskiy avtozavod (Gor'kiy Automobile Plant) also has such a push-button control and the GAZ-13 have this control similar to that of Chrysler and Plymouth types. There is a mechanical (Photo 1) and an electrical (Photo 3) push-button control, the latter experimentally installed in the ZIL-111, where the electromotor, change-over switch and decelerator have been assembled in one unit measuring 240 x 140 x 85 mm. The weight usually does not exceed 1.25 kg. The characteristics are compared with those of American makes. A general recommendation to adopt this type of transmission control for all Soviet light cars must be preceded by comparative experiments with both types of push-button control over an extended period of time. There are 3 photos and 1 schematic diagram.

Card 1/2

Push-Button Control of the Transmission

117-5A-7-0/20

ASSOCIATION: Moskovskiy avtozavod imeni Likhacheva (The Moscow Car Plant
imeni Likhachev)

1. Automobiles--Operation 2. Automatic transmissions--Control systems

Card 2/2

BIRO, F.; KASA, L. [Casa, L.]; BIRO, G.; NAD¹, A. [Nada, A] (Tyrgu-Mures 1)

Effect of butazolidine on the liver parenchyma. Arkh. pat. 25
no. 8:57-60 '63 (MIRA 17:4)

1. Iz kafedry normal'noy anatomii i operativnoy khirurgii (zav.
prof. T. Marosh [T. Maros] i kliniki infektsionnykh bolezney
Tyrgu-Mureshskogo mediko-farmatsevticheskogo instituta, Rumyn-
skaya Narodnaya Respublika.

FAZAKASH, Shandor [Fazakas, Sandor]; NAD', Derd' [Nagy, Gyorgy]

Idiosyncrasy to neoprobanate (andaxin). *Klin. med.* 40 no.11:
129-130 N°62 (MIRA 16:12)

1. Iz 2-go terapevticheskogo otdeleniya Debretsenskogo meditsinskogo instituta.

BOZOKI, G.; GOMBOSHI, Ye. [Gombosi, E.]; NADⁱ, E. [Nagy, E.]

Effective mass generated in diffraction dissociation processes.
IAd. fiz. 2 no.5:945-949 N '65.

(MIRA 18:12)

1. TSentral'nyy institut fizicheskikh issledovaniy, Budapesht.

29328

S/109/61/006/010/027/027
D201/D302

9,4360 (1139, 1331)

AUTHOR: Nad', F.Ya.

TITLE: Anomalous volt-ampere characteristic of alloyed germanium

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 10, 1961, 1775

TEXT: This is a brief report on the behavior of a sample of germanium with soldered indium contacts. The sample was a monocrystal of p-type Ge with gold impurity concentration $3 \times 10^{15} \text{ cm}^{-3}$ and the degree of compensation of 0.01. The sample had dimensions $1 \times 1.5 \times 12 \text{ mm}^3$ and was placed in a cryostat at 80°K , at which temperature it had a resistance of about 1 kilohm. It was found that with current flowing in one direction the characteristic was linear. The change in the applied voltage polarity produced a substantial change in the shape of the volt-ampere characteristic: an increasing voltage produces at 4.98 V a step-change in the current. With the reversal of voltage the step-change occurs at 4.6 V so that

Card 1/2

29328

S/109/61/006/010/027/027
D201/D302

Anomalous volt-ampere ...

the volt-ampere characteristic produces in effect a hysteresis loop. Also, by connecting the crystal in series with a sensitive load ($R_{load} \approx R_{sample}$) and a battery supply and by varying the voltage of the latter, sinusoidal stable oscillations were observed, f ~~500~~ 500 Kc/s and amplitude ~ 70 mV. The oscillations were observed only at the polarity of potential which corresponded to the presence of the hysteresis loop. The illumination by white light stopped the oscillations. After switching off the light the oscillations started again with amplitude build-up for about 1 min. It is stated in conclusion that the above effects seem to be related to the processes occurring at the contacts. There are 1 figure, and 1 non-Soviet-bloc reference. The reference to the English language publication reads as follows: R. Bube, J. Appl. Phys., 1960, 31, 12, 2239.

SUBMITTED: April 8, 1961

Card 2/2

S/104/62/007/003/023/026
0256/0302

9.4/77 (1051)

AUTHORS: Alekseyeva, V.G., and Nad' E.Ya.

TITLE: Kinetics of photoconductivity in gold-doped n-type germanium.

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 3, 1962,
542 - 546

TEXT: Photoconductivity of n-type germanium doped with gold was investigated experimentally in an attempt to obtain information on the dependence of photocarrier recombination upon the charge state of the gold atoms. To produce samples with a single or two predominant charge states of the gold atoms a donor compensating admixture of antimony was employed. Two types of samples were used in the investigation: 1) Au⁻ and Au⁻² predominant; 2) Double charged Au⁻² along predominant. The experiments were carried out at 77°K, using pulsed monochromatic light, the pulses of the photocurrent were amplified with a wide-band amplifier and recorded photographically from the screen of a c.r. oscilloscope. The obtained photoconductivity decay curves for the samples of the first type show

Card 1/2

Kinetics of photoconductivity ...

S/109/62/007/003/023/123
D256/D302

two components: A fast one with $\tau = 15$ μ sec. and a slow one with $\tau = 80$ to 90 μ sec. The curves for the samples of the second type can be well fitted using one only exponent with $\tau = 120$ to 150 μ sec. The dependence of the photoconductivity decay upon the wavelength of the light was also investigated, showing that in the region of admixture excitation the effective decay time remained constant, but an increase was observed when moving to the region of self-absorption. From the experimental results the cross-sections for carrier capture by the single and double-charged atoms were estimated to be respectively 1×10^{-17} cm^2 and 4×10^{-19} cm^2 . The calculation was carried out under the assumption that the Fermi level is close to the level of Au^{-2} . There are 3 non-Soviet-block references. The references to the English-language publications read as follows: W.C. Dunlap, Jr., Phys. Rev., 1953, 91, 5, 1282; 1955, 97, 3, 614; 1955, 100, 6, 1629; H.H. Woodbury, and W.M. Tyler, Phys. Rev., 1957, 105, 1, 84; L. Johnson and H. Levinstein, Phys. Rev., 1960, 117, 5, 1191. X

SUBMITTED: May 24, 1961

Card 2/2

ACCESSION NR: AP4041710

S/0181/64/006/007/2064/2071

AUTHORS: Nad', F. Ya.; Oleynikov, A. Ya.

TITLE: Photoconductivity of n-type indium antimonide in the long wave region of the spectrum.

SOURCE: Fizika tverdogo tela, v. 6, no. 7, 1964, 2064-2071.

TOPIC TAGS: photoconductivity, indium antimonide, electron conductivity, Hall constant, Hall effect, ionization energy, photoeffect

ABSTRACT: In order to ascertain which of two possible photoconductivity mechanisms predominates under various conditions, the authors investigated the relative contribution of extrinsic photoconductivity and the photoconductivity connected with heating of the carriers by the radiation, to the photosensitivity of n-type InSb at millimeter wavelengths and helium temperatures. The dependence of the Hall constant on the temperature and on the magnetic field was

Card 1/3

ACCESSION NR: AP4041710

measured. The ionization energy of shallow impurities in n-InSb and its dependence on the magnetic field were determined. The investigation showed that in specimens where the uncompensated donor density is lower than 10^{15} cm^{-3} the application of a magnetic field increases the photosensitivity appreciably, owing to the increased contribution of the extrinsic photoconductivity. The Hall-effect measurements yielded a value 10^{-3} -- 10^{-4} eV for the ionization energy, which is found to depend on the magnetic field. The Hall-effect measurements were well confirmed in the investigation of the photoelectric properties. Variation of the magnetic field makes it possible to shift the "red edge" of the photoeffect. The effect of the concentration of the uncompensated donors on the photoresistivity in the long wave region is briefly discussed. "The authors are grateful to T. M. Lifshits and Sh. M. Kogan for valuable discussions and continuous interest." Orig. art. has: 6 figures, 2 formulas, and 2 tables.

Card 2/3

ACCESSION NR: AP4041710

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR, Moscow
(Institute of Radio Engineering and Electronics, AN SSSR)

SUBMITTED: 29Jan64

ENCL: 00

SUB CODE: SS, EM

NR REF SOV: 003

OTHER: 006

3/3

Card

L 61524-65 EWT(1)/EWT(m)/EEG(t)/EWP(t)/EWP(b) Pz-6 IJP(c) JD/AT

ACCESSION NR: AP5015420

UR/0023/65/162/004/0801/0802

AUTHOR: Lifshits, T. M.; Nad', F. Ya.

TITLE: Photoconductivity of germanium alloyed with group V admixtures at photon energies less than the ionization energy of the admixtures

SOURCE: AN SSSR. Doklady, v. 162, no. 4, 1965, 801-802

TOPIC TAGS: doped germanium, photoconductivity, germanium antimonide, germanium arsenide

ABSTRACT: Photoconductivity was studied in samples of Ge alloyed with Sb and As (concentrations of the admixtures were $\sim 3 \cdot 10^{15} \text{ cm}^{-3}$ and $1 \cdot 10^{15} \text{ cm}^{-3}$, respectively). The results show that photoconductivity occurs even at photon energies which are substantially smaller than the ionization energy of the impurity atoms. This photoconductivity may be related to partially overlapping excited states, and the contribution of excited states to the impurity photoconductivity may proceed via phonon participation in electron transitions from the impurity levels into the conduction band (the photon and phonon absorption may occur consecutively or simultaneously). The strong temperature dependence of the observed photoconductivity seems to favor such a mechanism (see Fig. 1 of the Enclosure). Orig. art. has: 1 figure. [08]

Card 1/3

L 61524-65

ACCESSION NR: AP5015420

ASSOCIATION: Institut radiotekhniki i elektroniki Akademii nauk SSSR (Institute of
Radio Engineering and Electronics, Academy of Sciences, SSSR)

SUBMITTED: 11Dec64

ENCL: 01

SUB CODE: MM, EM

NO REF SOV: 000

OTHER: 003

ATD PRESS: 4037

Card 2/3

L 6152h-65

ACCESSION NR: AP5015420

ENCLOSURE: 01

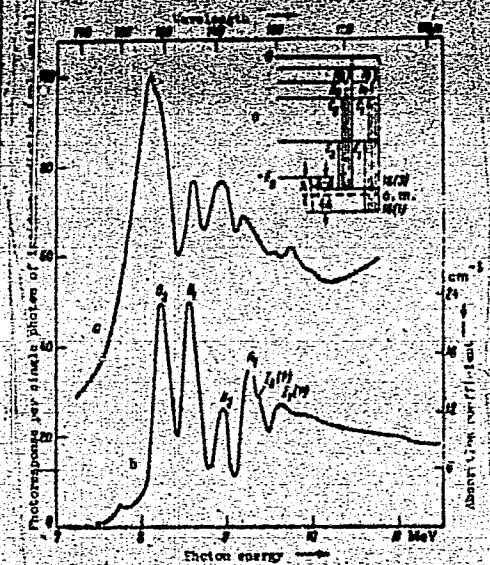


Fig. 1. a - Long wave internal of photoconductivity spectrum of Ge:Sb ($N_{\text{Sb}} \sim 3 \cdot 10^{15} \text{ cm}^{-3}$); b - optical absorption spectrum of Ge:Sb ($N_{\text{Sb}} = 7 \cdot 10^{14} \text{ cm}^{-3}$) [J. H. Reuszer, P. Fisher, Phys. Rev., 135, no. 4A, 1125, 1964]; c - level diagram of optical transitions from the ground states of micro-donors in Ge (E_0 = ground state of electrons at the donor center in the effective mass approximation; λ = center of mass displacement; $4A$ = ground state splitting).

Card 3/3

L 42816-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT
 ACC NR: AP6024481 SOURCE CODE: UR/0181/66/008/007/2149/2153

AUTHOR: Lifshits, T. M.; Nad', F. Ya.

ORG: Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki AN SSSR)

TITLE: Impurity photoconductivity of n-InSb in strong magnetic fields

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2149-2153

TOPIC TAGS: impurity conductivity, strong magnetic field, indium alloy, antimony alloy, photoconductor, photoconductivity

ABSTRACT: The subject of the present article is the investigation of the spectral dependence of the long-wave photoconductivity of n-InSb in a strong magnetic field in the 700-2000 mμ wavelength region, and the direct measurement of the photoionization energy of small donors in this material. The long-wave photoconductivity of n-InSb at 1.8K in magnetic fields of 10-35 ke has a spectral characteristic which is typical of normal impurity photoconductivity with a well-defined decay toward long waves. The position of the long-wave boundary determined by the half-decay point of the photo-response at various magnetic fields agrees in practice with the thermal energy of ionization obtained from the linear slope of the Hall coefficient temperature-dependence curves. The narrowing of the spectral characteristic of the impurity photoconductivity with an increase in the magnetic field indicates, apparently, that

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L 42816-66

ACC NR: AP6024481

with an increase in the magnetic field an increasingly greater significance is acquired by the optical shifts of electrons to the lower part of the continuous spectrum formed by the superposed excited states of the donor centers. The authors are grateful to Sh. M. Kogan for valuable discussions. Orig. art. has: 2 figures. [26]

SUB CODE: 20/ SUBM DATE: 23Dec65/ ORIG REF: 006/ OTH REF: 006 ATD PRESS:
5067

Card 2/2 *bbh*

ACC NR: AP6036959

(A, N)

SOURCE CODE: UR/0181/66/008/011/3208/3212

AUTHOR: Lifshits, T. M.; Sidorov, V. I.; Nad', F. Ya.

ORG: Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki AN SSSR)

TITLE: Extrinsic photoconductivity of germanium doped with antimony, arsenic, boron, or indium

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3208-3212

TOPIC TAGS: photoconductivity, impurity conductivity

ABSTRACT: The spectral distribution of the extrinsic photoconductivity of germanium containing various amounts of Sb, As, B and In (6×10^{13} - 6×10^{17} cm⁻³) was studied. Data on the impurity concentrations, charge carrier mobilities and ionization energies of the impurities in the samples studied are given. They show that as the concentration of the donor impurity N_d increases, the thermal ionization energy ϵ_t decreases considerably and it is equal to zero when $N_d = 6 \times 10^{17}$ cm⁻³. Data are presented on the shape of the spectral photoconductivity curve as a function of the concentration of the n- and p-impurities in germanium and of the magnitude of the electric field in the samples. In conclusion, authors thank N. P. Likhtman, who measured the electrophysical parameters of the series of samples of doped germanium. Orig.

Card 1/2

ACC NR: AP6036959

art. has: 6 figures and 1 table.

SUB CODE: 20/ SUM DATE: 21Mar66/ ORIG REF: 004/ OTH REF: 005

Card 2/2

BORISOVA, K.V., inzh.; OVECHENKO, N.G., inzh.; SMIRNOVA, T.V., kand.
tekh.nauk; LEVASHEVA, E.M., studentka; NAD', I. student

Plasticizers from chemical by-products for polyvinyl chloride.
Izv.vys.ucheb.zav.;tekh.leg.prom. no.1:57-61 '59.
(MIRA 12:6)

1. Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti.
Rekomendovana kafedroy tekhnologii iskusstvennoy kozhi.
(Plastics) (Plasticizers)

36936
S/081/62/000/007/030/033
B168/B101

15.8466

AUTHORS: Ovechenko, N. G., Nad', I., Pavlov, S. A.

TITLE: Artificial fatiguing of adhesion joints between polar polymers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 653-654, abstract 7P307 (Izv. vyssh. uchebn. zavedeniy. Tekhnol. legk. prom-sti, no. 4, 1961, 27-33)

TEXT: Joints obtained by folding layers of polyamide AK-60/40 (AK-60/40) and nairit HT (NT) (I) were subjected to static fatiguing on a ПНЭ-1 (PNE-1) apparatus by being stretched 25-150% and held in this position, and also to dynamic fatiguing on three apparatuses - a mechanical oscillator ГМК-1 (GMK-1), a machine for multiple stretching and compressing МРС-2 (MRS-2) and a machine of original design with a fatiguing frequency of 3 cycles per minute and producing a deformation of 20%. After fatiguing, the joints were split on a noninertia tensile-testing machine of original design, with which the momentary variation in splitting effort could be followed by means of strain gauges. In order to even out

Card 1/2

NAD, Igo

Economy of inland air transportation. Medun transp 9 no.8:
552-553 Ag '63.

NAD, I.

Economic aspects of the Yugoslav international air lines.
Medun transp 9 no. 11: 1962-1963.

NAD, Ivica, inz.

Elastic substructure of engines. Pt. 2. Brodogradnja 14 no.4:
115-122 '63.

NAD

NAD, Ivica, inz.

Elastic founding of machines. Brodogradnja 14 no.2:60-70 '63.

Yugoslavia

NAD

NAD, Ivica, inz.

Elastic founding of machines. Pt. 1. Brodogradnja 14 no.3:
90-99 '63.

Yugoslav

KEASTEN', V.; NAD', L.I.

Effect of oxidation-reduction processes on the solubility of
molybdenum in soils. Pochvovedenie no.12:79-81 1963.

(MIRA 17-11,

1. Sel'skokhozyaystvennyy institut Moshonmad'yarovar, Vengriya.

COUNTRY : USSR J
 CATEGORY : Soil Science, Physical and Chemical Properties
 of Soil.
 ABS. JOUR. : RZhBiol., No. 4, 1959, No. 15396
 AUTHOR : Vad', M.K.
 INST. : Leningrad Agricultural Institute
 TITLE : Methods of isolation of colloids of the soil.

ORIG. PUB. : Pochvovedeniye, 1957, No. 6, 20-27

ABSTRACT : Determination of colloids of various layers of the soil is possible only after the soil is saturation with a solution of germynets in order to form a certain quantity of particles of a sensitive ionic layer. Determination of the soil in a dry state without preliminary saturation with a solution of Avilaev's does not guarantee complete utilization. Colloids, isolated by germynets method, contain considerably more substances than the same colloids isolated by the Al-

Card: 1/2

ALEKSANDROVA, L.N.: ~~NAD~~ ~~...~~

Nature of organomineral colloids and methods of their study
[with summary in English]. Pochvovedenie no.10:21-27 1958.
(MIRA 11:10)

1. Leningradskiy sel'skokhozyaystvennyy institut.
(Soil colloids)

NAD, M.M.
ca

Aromatic organic tin compounds of the *m*-toluenes series.
K. A. Korchashov and M. M. Nud. J. Gen. Chem.
(U.S.S.R.) 4, 1424-9(1934); cf. C.A. 28, 4711¹. Al-
though Pb-Sn does not react readily with SnCl₄ at room
temp. (C.A. 24, 1306) m-(MeC₆H₄)₂Sn (I) reacts easily
with evolution of heat. m-(MeC₆H₄)₂Sn (II) reacts easily
at room temp. II (200 g.) in 100 cc. abs. Et₂O was prep'd in
g. amount. Mg and 250 cc. abs. Et₂O during the customary re-
action. The mixt. was then heated for 3 hrs. on a H₂O bath.
The mixt. was cooled with cold H₂O (greater cooling is to be
avoided) and 100 g. of l:l freshly distd. SnCl₄ in petroleum
ether was added in portions with efficient stirring. The
reaction went energetically with considerable heating up
the mixt., was heated 3 hrs. on a H₂O bath, the Et₂O re-
moved, the residue decanted, with ice and NH₄Cl soln.,
through a Büchner, the product washed with very small
quantities of cold EtOH and Et₂O (the meta compds. are
very sol. in org. solvents), dried on filter paper, and extd.
with boiling PhEt or CH₂Cl₂ (the meta compds. are
liquid coetg. the cryst. product with snow, and extd.
vessel coetg. the cryst. product with snow, removing the
SnCl₄ (10.9 g.) reacted with 20.2 g. I at room temp. in a
flask provided with a reflux condenser carrying a tube with
CaH₂, heated 2.5 hrs. on a H₂O bath and then 2 hrs. at
30-5° on an oil bath, gave, after 10 days in a desiccator
over CaCl₂, dichloro-m-toluenesulfonamide (III), mp. 30-40°
from petroleum ether). III gave a complex with CuH₄N.

III (1 g.) in 6-7 cc. alc. with excess NH_3 at room temp. for 0.5 hr., then heated quickly to boiling, gave, after filtration, washing the ppt. with hot H_2O , alc. and Et_2O , and drying at 40° , white amorphous infusible *m-m*-dinitro-*l*- $\text{H}_2\text{C}(\text{O}_2\text{M}-\text{McCall})_2\text{SnCl}_2$ (und., in org. solvents and aq. sol.).
 III (1 g.) in 2 cc. abs. alc. with formation of Ar_2SnX_2 washed with H_2O , dried at 60° , and recryst. twice by dissolving in CHCl_3 and pptg. with alc., yielding twice by distillation, *m-m*- $\text{C}_6\text{H}_3(\text{NO}_2)_2\text{SnS}$ (IV), which was filtered, dried, and recryst. by dissolving in CHCl_3 , PhH, AcOEt, C_6H_6 , and EtOH. IV dissolves in concd. and dil. HCl. In contrast to some azophenyl sulfides and in sulfides derived from Ar_2SnX_2 , IV is not oxidized in $(\text{NH}_4)_2\text{S}$.
 III (0.66 g.) in 5 cc. hot alc. with 2.5 g. HgCl_2 in 8 cc. boiling alc., heated 10 min. with a reflux condenser, filtered, washed several times with hot alc. and crystal. from CHCl_3 , gave *m-m*- $\text{C}_6\text{H}_3(\text{NO}_2)_2\text{HgCl}_2$ (m. 160°) to react at room temp. in a flask provided with a reflux condenser carrying a tube with CaCl_2 . The mixt. was then heated 2 hrs. at 100° , 3 hrs. at 160° , 7 hrs. at 180° (2 hrs. at $210-15^\circ$). Repeated fractionation of the product by distn. gave 50% of *m*-hydrochlorozinnane, *m-m*- $\text{C}_6\text{H}_3(\text{NO}_2)_2\text{SnCl}_2$ (V), m. $180-1^\circ$. V is a colorless, transparent liquid, fuming in air, d $^{20}_4$ 1.7816, which does not solidify at -20° . With moist air a solid hydrate is formed. V

is not in org. solvents. In H_2O it dissolves exothermically
to give an acid soln. which is pptd. by H_2S . V, heated with
 H_2O , gives an amorphous ppt., a product of partial hydroly-
sis. V (1.7 g.), dissolved with cooling in 2-3 cc. H_2O with
an excess of 20% aq. KOH, gave a white, amorphous ppt.
sol. in excess KOH. The filtered alk. soln. brought to
slight alk. with AcOH and neutralized with CO_2 gave white
m-methylsilicic acid, filtered, washed with warm H_2O ,
dissolved in (H) 70 cc. warm alc., the alc. removed under
reduced pressure at 40° , and dried in a vacuum desiccator
over P_2O_5 . The pure *m-MeC₂H₄SiO₂H* (VI) does not melt
but begins to decompose at 295° . VI is sol. in cold MeOH,
EtOH, Et₂O, $CHCl_3$, AcOEt and C_6H_6 , insol. in petro-
leum ether and H_2O . VI dissolves in acids and bases to
give salts
Lewis W. Butz

1ST AND 2ND CODES										3RD AND 4TH CODES									
PROCESS AND PROPERTIES MOOD																			
<p>BC</p> <p>c- and p-Tolyltinic acids: K. A. KOTCHENKO, KOV and M. M. NANI (J. Gen. Chem. Russ., 1935, 8, 1168-1167). $R'SnCl_2$ (I) ($R'=c$, $R=p-C_6H_4Me$) and H_2O_2 in EtOH yield $RHSnCl$, whilst in presence of alkali the product is HgR_2. $R'SnCl_2$, b.p. 157°/25 mm. (1:2 decomposed with C_2H_5N), prepared from $SnCl_4$ and $SnCl_2$, or from (I) and $SnCl_2$, is converted into p-tolyltinic acid; decamp. at 295°, by aq. KOH at room temp. $R'SnCl_2$, m.p. 48-50°, obtained from $SnCl_4$ and $SnCl_2$, yields $R'SnCl_2$, b.p. 157-158°/20 mm., with $SnCl_2$, and is converted into $(R'SnS)_2$ by H_2S, and into c-tolyltinic acid (II) by KOH. (II) is oxidized by $K_2Fe(OH)_6$ at room temp. to yield $PhMe$, $R'CN$, and H_2SnO_3. R. T.</p>																			
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION										FROM DONATION									
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NAD, M.M.

10

Preparation of triaryl tin halides and hydrides. K. A. Kocheshkov, M. M. Nag and A. P. Aleksandrov. J. Gen. Chem. (U.S.S.R.) 34:6678-8 (1963).—Triphenyltin hydride, m. 110°, distilled in 95% and *tri-n-butyltin hydride*, m. 100-101°, in 80% yield from the corresponding Ph_3SnCl and $(n\text{-Bu})_3\text{SnCl}$ (cf. C. A. 28, 7253) by shaking the chlorides in H_2O with excess 20% NaOH , distg. off most of the H_2O group, the residue to dryness at room temp. and vacuum, from petr. ether cooled with solid CO_2 .

Chas. Blanc

ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION

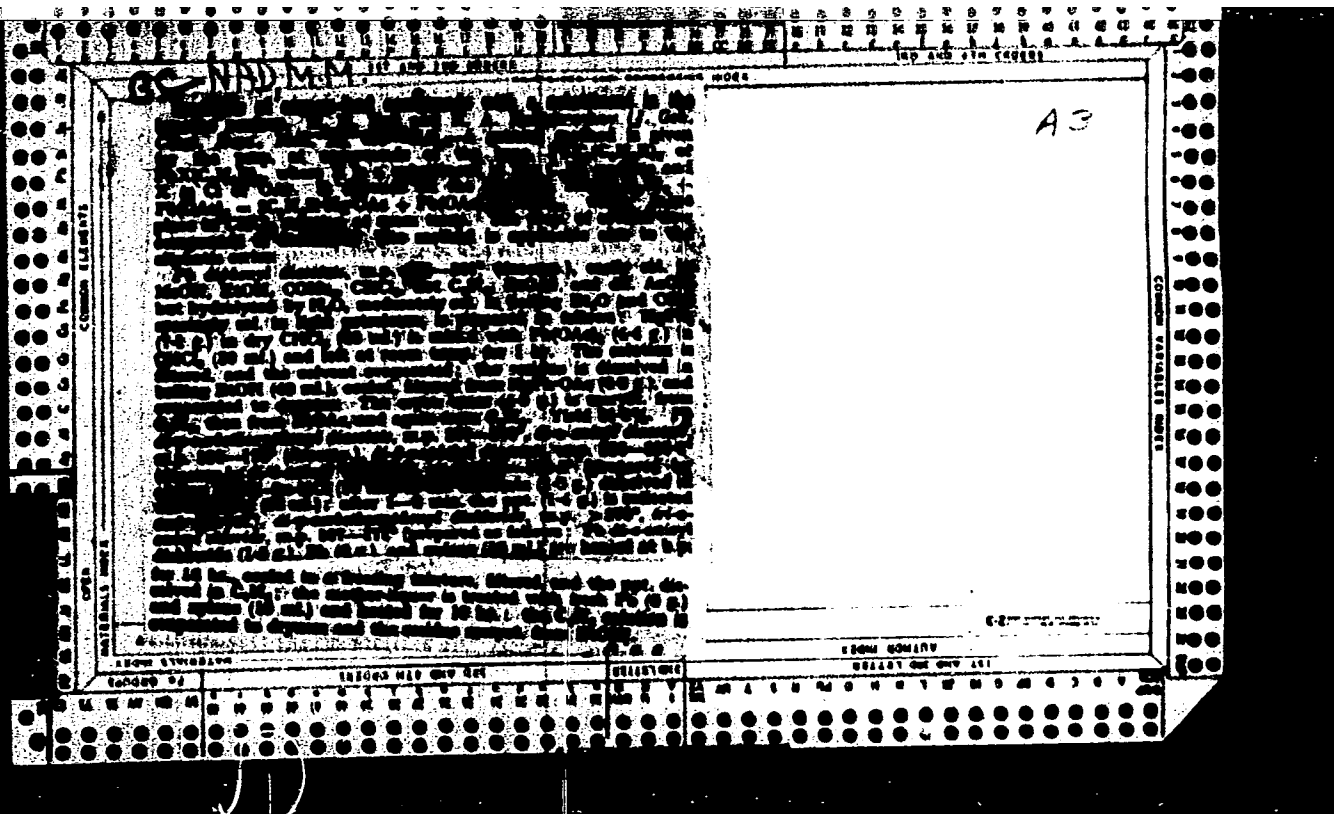
NAD, M.M.

The interaction of organic tin and mercury salts with tin-
sodium alloy and tin as a method of synthesis of highly
arylated organic tin compounds. M. M. Nad and K. A.
Kocheshkov. *J. Gen. Chem.* (U. S. S. R.) 8, 42 (3)
(1959); cf. C. A. 29, 3664d; 31, 2500d and preceding
(1959). Tetraarylstannanes, Ar_4Sn , are usually prep'd. by
abstr. The Grignard reaction with considerable difficulty and
poor yields. Triaryl tin chlorides, Ar_3SnCl , are derived
from the Ar_4Sn (cf. C. A. 28, 7233e). Ar_3Sn can be ob-
tained in good yields from org. Hg compounds, with Sn-Na
alloy (15% Na) in xylene, according to the reaction
 $\text{R}_2\text{Hg} + 2\text{PhHgCl} + 2\text{NaSn} = 2\text{PhSn} + 2\text{Ph}_2\text{Sn} +$
 2H_2 , where $\text{R} = \text{PhHgCl} + \text{ArSn} = \text{PhSn}$, $\text{Ph}_2\text{Sn} = \text{Ph}_2\text{Sn}$
+ H_2 . The reaction with Sn powder proceeds differently,
 $\text{Ph}_2\text{Sn} + \text{R}_2\text{Hg} = \text{Ph}_2\text{Sn} + \text{Sn}$ powder proceeds differently,
forming Ar_3SnCl . $2\text{PhHgCl} + \text{ArSn} = \text{Ph}_2\text{Sn} + 2\text{H}_2$,
 $3\text{PhHgCl} = 2\text{PhSn} + \text{SnCl}_2$, $\text{SnCl}_2 + \text{Sn} = 2\text{SnCl}$,
 $3\text{PhHgCl} = 2\text{PhSn} + \text{SnCl}_2$ to Ph_3SnCl and that of SnCl_2 .
The decoupling of Ph_3SnCl to Ph_2SnCl and that of SnCl_2
to SnCl was demonstrated by special tests. The pro-
ducts resist in boiling H_2HgCl with Sn-Na and Sn in
excess, resist in boiling H_2HgCl with CaH_2 after
xylene in 18 hrs. and exit the residue with CaH_2 after
xylene in partially or completely evapd. Ph_2Sn , in
the xylene is partially or completely evapd. (0.13 mol.)
224-5° (60.1% yield), prep'd. from 9.4 g. (0.033 mol.)
 PhHgCl and 30 g. Sn-Na in 60 ml. xylene. The filtrate

[illegible]

has then

430.32 METALLURGICAL LITERATURE CLASSIFICATION



NAD', M. M.

Mbr., Agricultural Lab., All-Union Inst. Exptl. Med. im. A. M.
Gor'kiy, Moscow, -1941-45-. Mbr., Lab. Org. Chem. im. Zelinskiy,
Moscow State Univ., -1940-. "Carbonyls of the VI Group Metals in the
Periodic System: I," Dok. AN, 26, No.1, 1940; "Method for the Synthesis
of Organo-Metallic Compounds of Lead having a Substituted Group in the
Benzene Nucleus," Zhur. Obshch. Khim., 12, Nos. 7-8, 1942; ("The
Synthesis of Organo-Bismuth Compounds of the type R3Bi by the Method
of Double Diazonium Salts," ibid., 16, No. 6, 1946); "Aromatic Organo-
Bismuth Compounds Containing an Atom of halogen in the Nucleus," ibid.

CO-AUTHOR WITH T. K. Kozlov, V. S. Kozlov and V. A. Kozlov

TALALAYEVA, T.V.; NAD', M.M.; KOCHESHKOV, K.A.

~~Etherates and dioxanates of lithiumorganic compounds.~~ Dokl. AN SSSR
109 no.1:101-104 Jl-Ag '56. (MLRA 9:10)

1. Chlen-korrespondent Akademii nauk SSSR (for Kocheshkov).
2. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.
(Lithium organic compounds)

NAD', M., Cand Agr Sci -- (diss) "Nature of organo-mineral colloids in soil." Leningrad, 1957. 17 pp; (Ministry of Agriculture USSR, Leningrad Agricultural Inst); 100 copies; free; (KL, 18-60, 154)

NAD', M.M.; KOCHESHKOV, K.A.

Selective reduction of polyhalogenated methanes by sodium-borohydride. Izv. AN SSSR. Otd. khim. nauk no.9:1122-1123
S '57. (MIRA 10:12)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova AN SSSR.
(Reduction, Chemical) (Methane) (Sodium borohydride)

30V/1916

PHASE I BOOK EXPLOITATION

5(a)

Vesoyumoye sotshechniye po khimii bora, 1955

Bor. trudy Konferentsii po khimii bora i ego soyedineniy (Boron Transactions of the Conference on the Chemistry of Boron and its Compounds). Moscow, Gostkhizdat, 1958. 189 p. Errata slip inserted. 2,000 copies printed.

Ed.: G.P. Lushinskiy; Tech. Ed.: M.S. Lar'ye.

PURPOSE: This book is intended for chemists, as well as for industrial personnel working with boron and its compounds.

COVERAGE: This collection contains 24 studies on the chemistry, crystalline structure, physicochemical properties, and technology of boron and its compounds. Twenty-two of the studies were presented at the All-Union Conference on Boron Chemistry, held at the Nauchno-Issledovatel'skiy Fiziko-Khimicheskiy Institut im. L. Ya. Karпова (Scientific Research Physicochemical Institute im. L. Ya. Karпов) in

~~December 1955. Two of these articles deal with the thermochemistry of boron. The two studies on "boronum" production are being published for the first time. The studies are well illustrated and accompanied by bibliographies.~~

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Boron: Transactions of the Conference (Cont.)	30V/1916
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Kudintseva, G.A., V.A. Epel'baum, and B.M. Tsarev. Synthesis of the Hexaborides of Certain Rare Earth Metals and Their Electron Emissive Properties	112
Shverdlina, N.Y., M.M. Tsad' (Deceased), and K.A. Kocherzhov. Soluble Hexaborides as Reducing Agent of Organic Fluorine Compounds	120
Kuznetsov, I.M. Present State and Future Prospects for Expanding the Raw Material Base of Boron	124
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Card 4/6

5(3), 5(4)

SOV/62-52-1-10/38

AUTHORS:

Nad', M. M., Talalayeva, T. V., Kazernikova, G. V.,
Kocheshkov, K. A.

TITLE:

Fluorinated Styrenes (Ftorirovannyye stiroly) Communication
I. 2,4-Difluoro Styrene (Soobshcheniye 1. 2,4-Diflorstiroly)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye Khimicheskikh nauk,
1959, Nr 1, pp 65 - 70 (USSR)

ABSTRACT:

In the present paper the authors synthesized 2,4-difluoro styrene for the first time. 2,4-difluoro-phenyl lithium was also obtained for the first time from 2,4-dibromo benzene and n-butyl lithium at low temperatures. The initial m-difluoro benzene was obtained from hydrochloric m-phenyl diamine. The synthesis was performed in several ways (Scheme). The following variants proved to be the most favorable:
a) m-difluoro benzene (I) was condensed with acetyl chloride in the presence of aluminum chloride in carbon disulfide at 35°. The yield of 2,4-difluoro-aceto phenone (II) amounted to 80-85%. (II) was reduced by the effect of sodium boron hydride solution of 10-15% in aqueous alcohol under very soft conditions at temperatures below 50°. The yield

Card 1/3

2

Fluorinated Styrenes. Communication I. 2,4-Difluoro Styrene SOV/62-59-1-10/38

of 2,4-difluoro phenyl-methyl carbinol (III) amounted to 85%, which was dehydrogenated by sulfuric acid potassium (Ref 11). The yield of 2,4-difluoro styrene (IV) amounted to ~70% in that case. The compound represents a mobile, colorless and pungent liquid. Boiling point 50-51° (28 mm).
b) 2,4-difluoro phenyl-methyl carbinol (III) was synthesized by way of lithium and organo-magnesium compounds; 2,4-difluoro-phenyl lithium (VI) was obtained by the effect of ether solution of 2,4-difluoro-bromo benzene on the ether solution of n-butyl lithium at -70°. A large quantity of acetaldehyde was added to the transparent 2,4-difluoro-phenyl lithium solution at -65 - -70°. The yield of 2,4-difluoro phenyl-methyl carbinol (III) amounted to 97%. The authors tried to synthesize directly 2,4-difluoro styrene by the condensation of vinyl bromide with 2,4-difluoro phenyl magnesium bromide in the presence of cobalt chloride (in nitrogen) (Ref 17). The yield of styrene (IV) was small: ~5 - 7% (as dibromide). There are 1 figure and 12 references, 1 of which is Soviet.

Card 2/8

2 Phys Chem Inst. in L. Ya Karpov

5(3), 5(4)

SOV/62-53-1-11/38

AUTHORS:

Nad', M. M., Talalayeva, T. V., Kozenskova, G. V.,
Kocheshkov, E. A.

TITLE:

Fluorinated Styrenes (Ftorirovannye stirol'y) Communication
II. 2,4-Difluoro- β -Fluoro Styrene and 2,4-Difluoro- β,β -Di-
fluoro Styrene (Sobshcheniye 2. 2,4-Diftor- β -ftorstirol i
2,4-diftor- β,β -diftorstirol)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 1, pp 71 - 75 (USSR)

ABSTRACT:

In the present paper the authors described the synthesis of
styrenes which were fluorinated both in the side chain and
nucleus. 2,4-difluoro- β -fluoro styrene and 2,4-difluoro-
 β,β -difluoro styrene were synthesized for the first time
(Diagram). 2,4-difluoro- β -fluoro styrene was obtained on
the basis of 2,4-difluoro- ω,ω -difluoro-aceto phenone (VI).
This ketone was obtained in two ways by using m-difluoro
benzene and 2,4-difluoro-bromo benzene as initial compounds.
The condensation in difluoro acetic acid with 2,4-difluoro-
phenyl lithium (V) at $\sim -70^\circ$ proved to be the most favorable.

Card 1/3

Fluorinated Styrenes. Communication II. 2,4-Difluoro-
 β -Fluoro Styrene and 2,4-Difluoro- β,β -Difluoro Styrene

SV 62-59-1-11/32

2,4-difluoro- α,ω -difluoro-aceto phenone was therein obtained in a yield of 50%. Furthermore, (VI) was reduced with sodium boron hydride in which 2,4-difluoro-phenyl difluoro-methyl carbinol (VII) was formed in a yield of 90%. The hydroxyl group of (VII) was substituted by chlorine under the influence of thionyl chloride in pyridine. The yield of 2,4-difluoro- α -chloro- β,β -difluoro benzene (VIII) amounted to 80%. Under the influence of zinc dust upon compound (VIII) 2,4-difluoro- β -fluoro styrene (IX) was synthesized in acetamide in a yield of 82%. 2,4-difluoro- β,β -difluoro styrene (XIII) was synthesized in a similar way. The yield amounted to 40%. The 2,4-difluoro-aceto phenone and m -difluoro benzene used in the synthesis were obtained according to the method described in Communication 1.

Difluoro acetic acid and difluoro chloro acetic acid were separated from corresponding sodium salts in a yield of 70-80%. There is 1 figure.

Card 2/3

5(3), 5(4)

SOV/62-59-2-14, 40

AUTHORS:

Nad', M. M., Talalayeva, T. V., Kazennikova, G. V.,
Kocheshkov, K. A.

TITLE:

Fluorinated Styrenes (Ftorirovannye stiroly). Communication 3.
Side-Chain Fluorinated Styrenes (Soobshcheniye 3. Stiroly,
ftorirovannye v bokovoy tsepi)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 2, pp 272-277 (USSR)

ABSTRACT:

In the present paper the authors present data concerning the
synthesis of β -fluoro styrene, β,β -difluoro styrene, α,β -di-
fluoro styrene and α -fluoro- β -chloro styrene. β -fluoro styrene
and α -fluoro- β -chloro styrene are described for the first time.
The synthesis methods of β,β -difluoro styrene and α,β -difluoro
styrene devised by the authors deviate from the conventional
methods described in publications. For the synthesis of ω,ω -di-
fluoro-acetophenone phenyl lithium was condensed with difluoro-
acetic acid at -70° . The yield was 70%. Besides dichloro-aceto-
phenone was fluorinated in dry glycerin under the influence
of potassium fluoride. Difluoro-acetophenone was obtained in a
yield of $\sim 35\%$. This was reduced under the influence of sodium

Card 1/3

SOV/62-59-2-14/40

Fluorinated Styrenes. Communication 3. Side-Chain Fluorinated Styrenes

boron hydride to difluoromethyl-phenyl-carbinol (yield 95%). Furthermore chlorine was substituted for the hydroxyl group of the carbinol by means of thionyl-chloride in pyridine which yielded α -chloro- β,β -difluoroethylbenzene (73%). By the action of zinc in acetamide chlorine and fluorine atoms were separated from this compound, with β -fluoro styrene being formed in a 60-65% yield. β,β -difluoro styrene was obtained in the following way: difluoro-chloro-acetic acid was condensed with phenyl lithium at -70° . The ω,ω,ω -difluoro-chloro-acetophenone was formed (50%). This was reduced by means of sodium boron hydride to difluoro-chloro-methyl-phenyl carbinol (yield 90-92%). By the action of thionyl chloride in pyridine the α,β -dichloro- β,β -difluoro ethyl benzene (78%) was obtained. By the action of zinc in acetamide 2 chlorine atoms were split off and β,β -difluoro styrene was formed in a 60-65% yield. By the influence of alcoholic KOH-solution hydrogen fluoride was split off and α -chloro- β -fluoro styrene (60%) with a small impurity of β,β -difluoro styrene was formed. α,β -difluoro styrene was synthesized as follows: From difluoro acetophenone α,α -dichloro- β,β -difluoro-ethyl benzene (85%) was obtained in the usual manner. By

Card 2/3

SCV/62-59-2-14/40

Fluorinated Styrenes. Communication 3. Side-Chain Fluorinated Styrenes

fluorination with antimony trifluoride the α -chloro- α,β,β -trifluoro benzene (30-40%) was obtained. By the action of zinc in acetamide β -difluoro styrene (45-50%) was formed at 125° after 40 minutes. α -fluoro- β -chloro styrene: $\alpha,\alpha,\beta,\beta$ -tetrachloro-ethyl benzene was obtained by means of phosphorus pentachloride from dichloro acetophenone (37-40%). This was fluorinated with antimony trifluoride to α,α -difluoro- β,β -dichloro-ethyl benzene (46-49%). By the action of zinc in acetamide α -fluoro- β -chloro styrene was obtained in a yield of ~80%. There are 5 references.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-Chemical Institute imeni L. Ya. Karpov)

SUBMITTED: April 19, 1957

Card 3/3

NAD', Yu.Yu.

Condition of electroexcitability of the color perception apparatus in the visual analyzer in persons with congenital disturbances of color vision. Zdrav. Kazakh. 21 no.1:25-29 '61. (MIRA 14:3)

1. Iz laboratorii fiziologii zreniya (zav. -- kandidat meditsinskikh nauk I.N.Shevelev) Kazakhskogo instituta glaznykh bolezney i kafedry glaznykh bolezney (zav. -- professor V.P.Rashchin) Kazakhskogo meditsinskogo instituta.

(ELECTROPHYSIOLOGY)

(COLOR BLINDNESS)

FOGEL', Mariya[Fogel, Maria], dots.; NAD', Zoltan[Nagy, Zoltan],
SIZA, Mario [Sziza, Mario], doktor [translator];
RAVAS, Yanosh [navasz, János], dots., nauchn. red.;
ERDEI, Mikhay [Erdei, Mihály], dots., nauchn. red.;
BERNAT, D'yerd' [Bernát, György], otv. izdatel'; ALEKSA, M.
[Aleksza, M], red.; CHERGE, I.[Csörgö, I.], tekhn. red.

[X-ray atlas of traumatology] Rentgenovskii atlas po trav-
matologii. Budapest, 1964. 439 p. Translated from the Hungarian.
(MIRA 17:3)

1. Zaveduyushchaya otdelom rentgenologii III terapevti-
cheskoy kliniki Budapeshtskogo meditsinskogo universiteta
i Gosudarstvennogo Instituta Travmatologii (for Fogel').
2. Glavnyy rentegenolog Budapeshtskoy Tsentral'noy Trav-
matologicheskoy Ambulatorii (for Nad').



NADABAN, Al., prof. inv. mediu (Arad)

Apparatus to determine the acceleration of gravitation. Gaz mat fiz
14 no.9:496-498 S '62.

SEWESH, M.; NADABAN, P.

Testing a wetted-wall evaporator under operational plant conditions. Kons. i ov.prom. 15 no.1:37-41 Ja '60.
(MIRA 13:5)

1. Budapeshtskiy konservnyy zavod.
(Budapest--Fruit juices)

SENESH, M.; NADABAN, P.

Some aspects of the concentration of fruit juices. Kons. i ov. prom.
15 no.10:30-33 0 '60. (MIRA 13:10)

1. Budapeshtskiy konservnyy zavod.
(Fruit juices)

SZENES, Endrene; NADABAN, Peter

Some new devices for manufacturing filamentary fruit juices.
Konzerv paprika no.4:125-128 J1-Ag '63.

1. Konzerv- es Paprikaipari Kutato Intezet; "Konzerv- es
Paprikaipar" foszerkesztoje (for Szenes). 2. Budapesti
Konzervgyar (for Nadaban).

SZENES, Endre; NADABAN, Peter

Condensation. Konzerv paprika special issue 45-52 '63.

1. "Konzerv és Paprikaipar" feldolgozása. (for Szenes)

NABUCHONORI, F.

C. A. ✓-48
Jan 10, 1954
Glass, Clay products,
Refractories and
Enamels, Metals

Praca Badawcza Glownego Inst. Mat. i Odlewnictwa 3, No. 2, 169-85(1950)(English summary).—A lab. corrosion test was developed to evaluate the adaptability of the materials in fireclay tank blocks and of the finished blocks made of them for production of Na-Ca glasses. A 20-mm. cube with well-polished faces was dried and placed in 40-60 g. of soda in a crucible made of Ni or of a ceramic material based on electrocorundum. The loaded crucibles were covered with a ceramic lid, perforated to allow a free escape of the CO₂ which maintained the melt in continuous agitation, and heated at 950-1000° for 1-2 hrs. The samples were then immersed into water and boiled for 1-2 hrs. They were kept immersed for several more hrs., while the water was repeatedly changed. The "intermediate layer" of glassy material covering the sample was removed, and the vol. of the sample was measured. The vol. loss was a measure of corrodibility. The probability of formation of solid inclusions ("stones") in the glass produced in tanks built of the tested material was shown by the uniformity of attack. It was assumed that the corrosive action of molten soda is proportional to that of molten glass. The Polish refractory mixts. tested belonged to 2 different types: a mixt. of filling material with binding clay both of different compns. or a mixt. of clay with fired material both of the same compn. The mixts. were prepd. by blending the following grain sizes: 0-0.5 mm., 4; 0.5-1 mm., 1; 1-2 mm., 2 parts in vol. They were then wetted and left to rest for 24 hrs. Cylinders 50 mm. diam. were made and fired at 1350° for 2 hrs. The test cubes were cut out from these cylinders. Materials of uniform comp. were superior, although the uneven corrosion of sample faces indicated a trend to form stones which were probably small enough, however, to be dissolved by the glass. Other tests were made on blocks of the best materials and on imported blocks including chem. analysis (SiO₂, Al₂O₃, TiO₂, Fe₂O₃), relative and abs. porosity, resistance to compression, pyrometric cone test, and microstructure (mullitization degree, quartz content, pores and cracks, impurities distribution). It was concluded that only the soda-corrosion test was sufficient by itself to qualify the material.

Henry W. Lawendel

10-12-54

13a abs.

31-9 Glass Ceramics; Refrac.

Quality of tank blocks for the glass industry. F. Nadachowski
(Glasn. Inst. Metal. Odzrow., 1960, No. 2, 169; Brit. ceram. Abstr.
1961, 200A).—The slag-resistance of tank blocks was determined
by exposing samples to the action of Na_2O at 1000°. Several Polish
fireclays were tested by the method and, where possible, the results
were correlated with chemical analysis of the clay and the porosity,
refractoriness, crushing strength, and microstructure of the blocks.
BRIT. CERAM. RES. ASS. (CI).

NADACHOWSKI, F.

Polish Technical Abstracts
No. 4, 1953
Other Branches of National
Economy, Miscellaneous

2534

Nadachowski F. Influence of Carbon Monoxide on Polish Made Fire-
clay Refractories.

Wplyw tlenku wegla na materialy szamotowe krajowej produkcji".
(Prace Inst. Metalurgii No. 2), Katowice, 1952, PWT, 15 pp., 11 figs.,
3 tabs.

The nature and the conditions in which carbon monoxide affects the disintegration process of the blast furnace linings are discussed in the article. The author has performed a number of tests on Polish made fireclay refractories. Samples of five different brick types were exposed to the action of Co for a period of 20 hours at a temperature of 50°C. Every few hours the changes occurring in the material were analysed and recorded. The samples were classified on the basis of the degree of disintegration, and listed in numerical tables. In the second part of the research, the author investigated, in a smaller apparatus, the concentrations of iron compounds extracted by means of heavy liquid from the same powdered sample. The changes in the weight of samples were registered as a function of time. By comparing the results of the investigations it was established, that the general resistance of refractories to the action of carbon oxide is governed by the ability to catalyse the reaction $2CO = C + CO_2$. This ability was determined numerically on the basis of the quantity and the rate of deposition of carbon on the iron compounds concentrate extracted from the refractory. Physical properties of fireclay bricks play, in this case, only a secondary part. The author gives a summary of his observations and practical conclusions in relation to Polish made fireclay refractories.

Anal. Electronic

Refractories

5000. EFFECT OF CARBON MONOXIDE ON FIRECLAY REFRACTORIES OF POLISH P
PRODUCTION. Nadachowski, F. (Prace Inst. Hutalurgii, 1942, vol. 4, 1110126)

NADACHOWSKI, F

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Nadachowski F. Spalling Resistant Magnesite Refractories.

"Magnezytowe wyroby ogniotrwałe odporne na nagłe zmiany temperatury". (Praca Inst. Min. Hutnictwa No 2), Stalinogród, 1953, PWT, 8 pp., 4 figs., 3 tabs.

The tests were carried out over increasing spalling resistance of refractory materials by using small additions of alumina and chromite, as well as modification of granulation. The best effects (more than 80 spalling cycles, without cracking) were obtained when all three technological processes were carried out simultaneously. The influence of clinker used on physical properties of spalling refractory materials. In order to obtain material with optimum properties, magnesium scrap is recommended as the chief component. Guiding principles for the technological process on an industrial scale; to start from a batch with special granulation (up to 3 mm) and the addition of 8% finely ground alumina and 5% of coarse grained chromite is recommended.

NADACHOWSKI, F.

"Some remarks concerning the process of cementing magnesites", p. 99,
(SZKLO I CERAMIKA, Vol. 4, No. 3, Mar. 1953, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL) , IC, Vol. 4,
No. 5, May 1955, Uncl.

NADACHOWSKI, F.

Fuel Abst.
Vol. 15 No. 4
Apr. 1954
Refractories

✓3239. SPALLING-RESISTANT MAGNESITE REFRACTORIES. Nadachowski, F.
(Prace Inst. Min. Hutn. (Centr. Inst. Min. Smelt.), 1953, 105-112). Factors influencing the resistance of refractory materials to thermal shock are discussed. Investigations carried out on magnesite refractories made from graded magnesite with small additions of alumina and chromite are described. As a result, a magnesite refractory was produced with good physical properties withstanding more than 50 spalling cycles. Tests in the roof of a small electric arc furnace were successful. Recommendations for the manufacture of this type of refractory bricks on an industrial scale are given. I.S.I.

NADACHOWSKI, F.

Processing of the white variety of Polish magnesite. F. Nadachowski (Inst. Met., Gliwice, Poland). *Prace Inst. Metalurg. Katowic* 5, 245-58 (1953) (English summary). 5

The white Silesian magnesite contains about 16% of silica after firing. The possibility of processing this raw material into a high-grade magnesite clinker was investigated, and the properties of the products made of such a clinker were detd. The leading factor of the process was the concn. of the raw magnesite by crushing and classifying. The silica impurities, being more friable, ar sep'd. in the finer fractions. Thus the following 3 types of materials were obtained: A, grains < 1 mm., 50.11% of wt. loss in firing, 4% of SiO₂; B, grains < 0.5 mm., 48.04% wt. loss, 7.4% of SiO₂; C, 44.37% wt. loss, 5.08% SiO₂. As the sintering

addn., mill scale (Fe₂O₃) was used in an amt. of 2.5% added to each material. When it was desired to sinter with the addn. of Ca ferrite, 3 or 6% of raw dolomite was added to the scale to obtain CaO.Fe₂O₃ or 2CaO.Fe₂O₃, resp. The magnesite with the addn. was ball milled down to 0.5 mm. particle size, and from this powder cylinders .30 mm. in diam. were pressed at 500 kg./sq. cm. The sintering was done at 1500 or 1600° at a heating rate of 200°/hr.; the samples were kept at the sintering temp. for 3 hrs. The sintered samples were analyzed for porosity, volumetric wt., resistance to compression, linear shrinkage, and microstructure. The results indicated that with the increasing SiO₂ content the difficulty of sintering increased. This impurity hinders the periclase grain growth, especially when uniformly distributed in the mass. The best sintering was obtained with the addn. of CaO to the mill scale, and the results are practically equally good with both mono- and di-Ca ferrite. The samples sintered at 1600° indicate a much better uniformity and less porosity than the ones sintered at 1500°. However, the addn. of CaO resulted in too low a softening point under load (below 1500°). The conclusion was that to obtain a product of high quality from the concd.

magnesite it was necessary to add only the mill scale without CaO and that to produce such a material on a com. scale a wet process in a rotary kiln was indicated as assuring a fine comminution and a good blending of the load. In the 2nd part of the work the resistance of the compacts, sintered from the clinker produced as described above, to corrosion by the converter slag was detd. The corrosion tests were done with 2 different methods. A 10-g. slag tablet (pressed from powder) was placed on a sample cylinder, and both were heated for 3 hrs. at 1850°. The results were estd. from the appearance of the sample and from the depth of corrosion. The alternate method consisted in detg. the softening point of cones made of 80% of refractory material and 20% of the slag. The 2 types of material tested (2.84 and 0.92% SiO₂) indicated a good resistance to corrosion. In the 3rd part of the work the influence of the amt. of added Fe₂O₃ on the magnesite sintering was investigated. Conc'd. magnesite (2.88% SiO₂) was mixed with 1.25 or 1% of Fe₂O₃ added in the form of mill scale or mill dust. The best results were obtained by addn. of about 1% of Fe₂O₃, preferably as the mill dust. The superiority of the dust over the scale was due probably to the presence of CaO in it. Thus it was possible to produce a clinker at 1600° of MgO.

Henry W. Lawendel

11-10

NADACHOWSKI, Fr.

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The rotary kiln lining in the production of sulfuric acid and cement clinker from anhydrite. Fr. Nadachowski. *Przemysl Chemiczny* 9, 55-62 (1953) (English summary). The chemical conditions in working conditions of the process of anhydrite decomposition in a rotary kiln and the properties of various brands of acidic and basic refractories to be used in the lining are given. The lining of the heating and the cooling regions of a rotary kiln should be fireclay contg. more than 40% Al₂O₃, and the lining of the firing region should consist of basic refractories ("Radex A" or "Ankral" type), resistant to temp. changes in temp. The Polish basic refractories (stabilized dolomite, forsterite, and magnesite) are not sufficiently resistant to temp. changes; however, stabilized dolomite is the most resistant to corrosion of all lining materials.

Gene A. Wozny

10-12-54
mex

NADACHOWSKI, F.

"Processes Developed for Various Types of Firebrick in High Temperatures." p. 109
(HUTNIK, Vol. 20. No. 3, Mar. 1953) Warszawa

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10,
October 1953. Unclassified.